



Coyote Crier

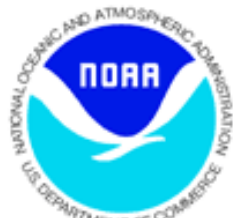
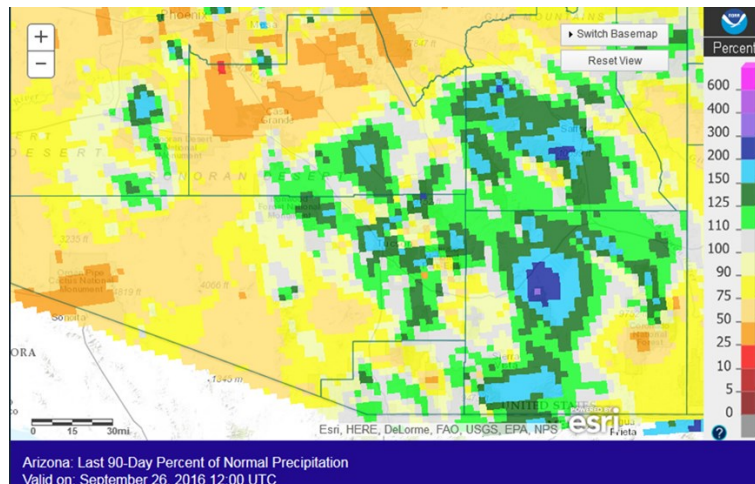
Volume 22, Issue 2

Fall /Winter 2016/2017

SKYWARN Newsletter Serving the Weather Spotters of Southeast Arizona

2016 Monsoon Rainfall Totals

John Glueck, Senior Forecaster and Climate Focal Point



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2016 Monsoon rainfall across southeast Arizona			
Pima County		Cochise County	
Arivaca	14.15"	Coronado National Memorial	17.67"
Kitt Peak	11.80"	Portal	14.59"
Vail	10.86"	Chiricahua National Monument	13.78"
Redington	9.98"	Tombstone	12.15"
Sasabe	8.24"	Sierra Vista	11.34"
Tucson International Airport	7.40"	Douglas Airport	10.40"
Green Valley	6.45"	Bisbee	10.32"
Anvil Ranch	6.13"	Willcox	9.75"
Ajo	2.75"	Cascabel	8.32"
Organ Pipe Cactus Ntnl Monu- ment	1.69"	Benson	8.40"
Pinal County		McNeal	7.48"
Oracle State Park	11.41"	San Simon	5.63"
San Manuel	9.03"	Graham & Greenlee Counties	
Picacho Peak	5.20"	Black River Pumps	12.16"
Santa Cruz County		Fort Thomas	7.00"
Nogales	14.63"	Safford Agricultural Station	5.66"
Patagonia	14.00"	Duncan	4.32"
Tumacacori National Monument	12.24"		

Winter Outlook 2016-2017

Daniel Leins, Science and Operations Officer



The Climate Prediction Center (CPC) released the official winter outlook for 2016-2017 and once again, southeast Arizona will be influenced by factors across the Pacific Ocean. Unlike last year when a near record El Niño was forecast, this winter will see the possibility of a weak La Niña developing. Historically, La Niña results in slightly drier than normal weather across much of the southern United States as well as slightly warmer than normal temperatures. Conversely, those living in northern climates are expected to

see slightly wetter and cooler conditions this winter. What does this mean specifically for southeast Arizona? It means that the odds are tilted slightly in favor of a drier and warmer winter than normal. More specifically, CPC is calling for a 40% chance of drier than normal conditions and a 50% chance of warmer than normal temperatures across southeast Arizona. It is important to note however, that this does NOT mean that we'll be dry all winter with record temper-

atures every day! We will still see weather systems that bring beneficial desert rain and mountain snow to the area. At the same time we'll also see days where temperatures fall well below normal. At the end of the winter, we'll take a look back at what actually happened and how the forecast verified like we always do so that we can continue to improve and provide better information and services in the future.

It's also worth mentioning that these outlooks always refer to "normal". So what exactly IS normal during the winter months anyway? What temperatures would we typically see across southeast Arizona during the months of December through February?

"Historically, La Niña results in slightly drier than normal weather across much of the southern United States as well as slightly warmer than normal temperatures".



A greater than 40% chance of below normal precipitation for southeast Arizona.



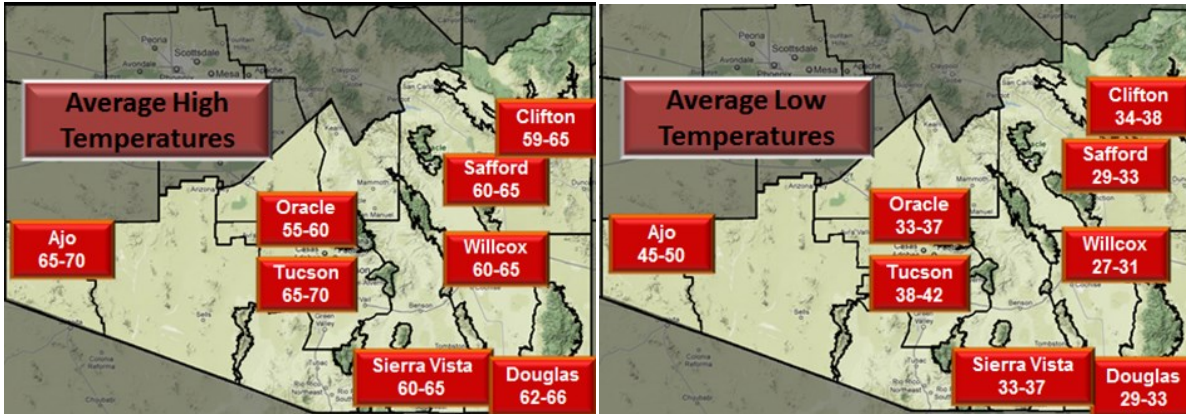
A greater than 50% chance of above normal temperatures for southeast Arizona.

GET THE INFORMATION YOU NEED...24 HOURS A DAY...GET A NOAA WEATHER RADIO!

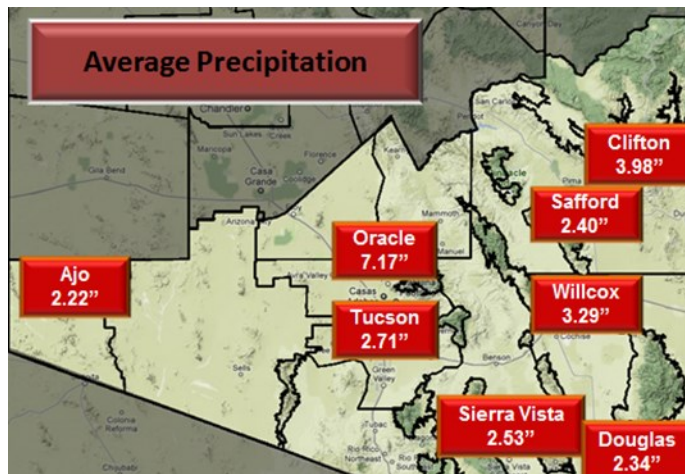


Winter Outlook 2016-2017

Daniel Leins, Science and Operations Officer



Typically, winter months in southeast Arizona see daytime highs in the mid 60's to lower 70's across the deserts. Higher elevations are cooler with highs only reaching the lower 60's. Overnight lows are a bit more variable across the region. Desert lows will usually fall into the 30's and 40's, while the higher elevations will frequently dip below the freezing mark at night.



"It is important to note however, that this does NOT mean that we'll be dry all winter with record temperatures every day."

As for precipitation, December through February usually sees anywhere from 2-3 inches of rainfall across the deserts. Higher elevations can see 3-4 inches of total precipitation (rain and snow), with even higher amounts on the mountain peaks.

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Monsoon 2016 Wrap-Up

Emily French, General Forecaster and Storm Data Focal Point



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"Rainfall reports of over 0.50" in 15 minutes and storm total amounts of nearly 2 inches occurred with this storm, prompting motorists to be caught off guard and multiple swift water rescues to be carried out"

Climatologically, the world transitioned out of El Nino this past spring with Monsoon 2016 occurring during an ENSO-neutral period. Rainfall amounts

from June 15 through September 30 were slightly above normal for the majority of locations. Otherwise, 2016 was a fairly typical monsoon with

many reports of wind damage and flash flooding across southeast Arizona. Below is a closer look at a few highlights from Monsoon 2016.

Severe Thunderstorm Rips through Tucson on June 26th

We kicked off Monsoon season with a severe weather event in Tucson on June 26th when a powerful thunderstorm pushed through the metro area around 7 pm. Rainfall reports of over 0.50" in 15 minutes and storm total amounts of nearly 2 inches occurred with this storm, prompting motorists to be caught off guard and multiple swift water rescues to be carried out. Additionally, thunderstorm wind gusts of an estimated 75 mph tore through the city. Trees fell on homes and carports in the Winterhaven area of town (see picture to the right, courtesy KVOA), and severe damage was sustained at the Campbell Ranch Apartments when trees fell on buildings and vehicles. The Covenant Genera-



tions Church sustained considerable roof damage. Major tree damage occurred at Himmel Park, and one person was electrocuted after coming in

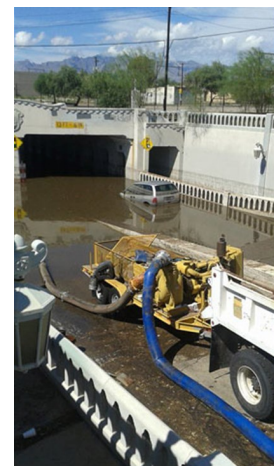
contact with a live downed power line, but thankfully survived. For some residents, power was not restored until noon the following day.

Flash Flooding Causes Problems in Tucson on July 1st

Early morning thunderstorms initiated severe flash flooding throughout the Tucson metro through the early afternoon hours. The Tucson Fire Department reported over 60 water-related calls and road closures occurred after up to 2.5 inches of rain fell. The Stone Street underpass was closed for several hours, holding 8 feet of

standing water and a stalled vehicle (see photo next page). Many surface streets ran with a foot or more of rainfall runoff. A daily record of 0.83 inches of rain fell at the Tucson International Airport.

Stone Street Underpass July 1 - KOLD



Monsoon 2016 Wrap-Up

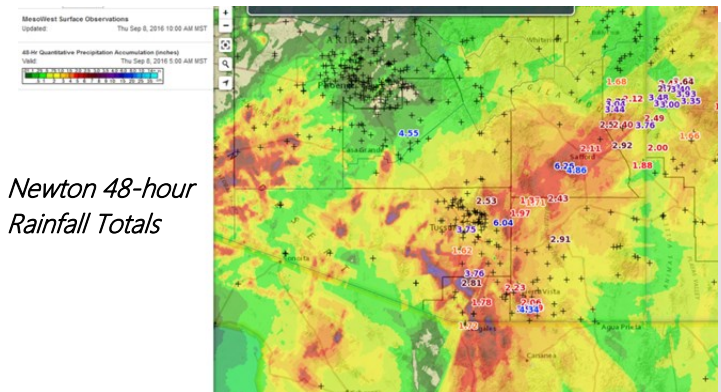
Emily French, General Forecaster and Storm Data Focal Point

Newton Crosses into Arizona as a Remnant Low on Sep 7th-8th

As is typical of the end of each Monsoon season, our eyes often turn toward the tropics. Tropical Storm Newton formed in the eastern Pacific Ocean early on Sep-

tember 5 and in 18 hours had strengthened to a hurricane. At it's peak, Hurricane Newton packed maximum sustained winds of 90 mph, a

high-end category 1 storm. The storm tracked northward along the Baja California before taking a northeastward jog toward Arizona. On September 7, Newton crossed into Arizona in between advisories. The preliminary assessment from the National Hurricane Center indicates they do not believe the storm crossed into the US as a Tropical Storm based on its organization, satellite presentation and wind speed observations from southern Arizona. The peak wind gust recorded during the event was 68 mph at the Hopkins RAWS (2147 m) in the Santa Rita Mountains and occurred well before the center of circulation neared the border. Heavy rainfall in excess of 4 inches in the Sierra Vista area caused several road closures. One swift water rescue occurred in Hereford, where a couple and their dog were trapped in their vehicle. No one was injured. On average, valley locations received up to 1.5" of rainfall with up to 6" in some of the mountains, over a 48-hour period.



Newton 48-hour Rainfall Totals

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tween advisories. The preliminary assessment from the National Hurricane Center indicates they do not believe the storm crossed into the US as a

"The storm wiped out 4000 acres and an estimated \$4.4 million in cotton crop, which could be devastating for farmers without insurance"

Large Hail Destroys Cotton Crops in Safford on Oct. 8th

Late in the evening on Saturday, October 8, 2016, a monster storm produced hail up to 2" in diameter in Safford. The hailstones of this size were numbered; it was an abundance of smaller hail which fell for up to 20 minutes which inflicted the most damage. The hail accumulated up to 6 inches deep in some parts of town, and did not completely melt by the next morning. Multiple homes and vehicles sustained major damage. The storm wiped out

4000 acres and an estimated \$4.4 million in cotton crop, which could be devastating for farmers without insurance. 2.32 inches of rain fell at the Safford Airport, and an estimated 8000 people were stranded at the Graham County Fair due to flood waters restricting access to the highway. Graham County passed a disaster declaration on October 12th.



Safford Hail Storm the next morning. Dave Sowders, EAC.



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Two of NWS Tucson Employees Retiring at the End of the Year

Greg Mollere, Senior Forecaster and Spotter Training Coordinator



Greg Mollere

"As this chapter of my life closes and new opportunities present themselves in the future, I just want to express my gratitude to all of the spotters across southeast Arizona and your willingness to participate in the SKYWARN program"



I am somewhat of an anomaly as a meteorologist in the NWS, in that I have only served in two offices. I started my career in the latter part of 1986 as an intern in Tallahassee, Florida. I became a general forecaster and served in that office until early 2003. In those days starting as an intern in a WSO (Weather Service Office), I was trained by "Meteorological Technicians", a group of folks that were highly professional and took their responsibility as weather observers and radar operators very seriously. I learned a lot from those folks in those early years. I served as the Marine focal point during the end of my years in Tallahassee. This was a focal point duty that I enjoyed, since I was directly involved, along with the SOO (Science and Operations Officer), in helping to train the forecasters in all aspects of the program.

Tallahassee was a great place to begin my career as it gave me plenty of experience with summer convection, severe weather episodes related to frontal passages, not to mention tropical weather. There were even a few winter weather episodes thrown in for good measure. In those early days, as an intern, you worked evening and midnight shifts solo, so the responsibilities were mine alone.

I will cherish the memories of working with the folks there, since we were like family and we would get together frequently for dinners and activities outside the office. I also went fishing with the Electronics Technician on several occasions in some of the "bass" filled lakes of North Florida. I also had the opportunity to fish in the Gulf of Mexico a few

times. I still keep in contact with some of the people that I used to work with via Facebook.

I jumped on the chance to come to Tucson in early 2003, since members of my family reside in the Phoenix metro and I thought it would be nice to be closer to family again, not to mention a promotion to Senior Forecaster. After being in Tucson for a few years I was asked to take over the "Spotter Training Program", which at first I was a bit hesitant because I have always been fearful of public speaking. However, after the first couple of training sessions I was hooked. I have enjoyed meeting and training the weather enthusiast that live in my forecast area to be certified weather spotters and I can now say that I no longer have a fear of public speaking.

I currently work with some very fine people here in the Tucson office and they also feel like family. We have participated in activities outside the office, like a bowling league several of us joined for a few years. I will miss working with them on a regular basis, but I plan to stay in the Tucson area after retirement and I am sure I will remain in contact with them and enjoy activities with them in the future.

Having worked in this agency for 30+ years, the folks I have met throughout my career are selfless, dedicated people that have an intense love of what they do and take their responsibilities very seriously, especially when it comes to severe weather warnings and alerting the public to dangerous and sometimes life threatening weather. Sacrifices are often made in their personal lives that the public at large will

never know. Missing out on family activities, especially on holidays, is not uncommon due to the hours that we work. I am proud to have served with such people during my career.

As far as my plans when I retire, I hope to be able to do some traveling around the country. I have never been to the Pacific Northwest, the MidAtlantic or Northeastern parts of the country. In addition to traveling, I plan to sleep more, procrastinate less, attend church more, judge less, listen more, speak less, exercise more and eat less.

As this chapter of my life closes and new opportunities present themselves in the future, I just want to express my gratitude to all of the spotters across southeast Arizona and your willingness to participate in the SKYWARN program. It was a pleasure traveling to various locations to present the training material and to meet quite a few of you over the past nine years.

Upon my departure, Emily French, our newest General Forecaster will be taking over my responsibilities as Spotter Training Coordinator. You may see her this spring during some of the upcoming spotter training sessions. Some of you may have already met her, she taught the "Advanced" Spotter Training class this past June. I wish her all the best in her new duties and also in all of her future endeavors. I am sure you will make her feel welcome as she takes on this new responsibility.

Two of NWS Tucson Employees Retiring at the End of the Year

Mic Sherwood, OPL (Observation Program Leader) and Cooperative Observer Program Focal Point

After graduating from Henry Abbott Technical School in Danbury Connecticut, early 1977, I went directly into the Marine Corps. One of the finest duty stations I would ever get selected to be a part of was Marine Barracks 8th & I Streets Washington DC, "The Home of the Commandant of the Marine Corps". Not only did I serve with true professionals, it allowed me to travel the world.

Some people do not know what career they want to follow until they have been out in the world a bit. For me, finally it came when I was six years into a military enlistment. In 1982, The U.S. Marine Corps gave me the opportunity to change what I was doing at that time. They pointed me to Chanute AFB, and off I went to attend the Multi-Service Observing and Forecasting training programs.

With course completion certificates in pocket, I was directed to Marine Corps Air Station Cherry Point, NC where I enjoyed a whole new career, got married and had a son. In those days we had Radio Teletype, Hand plotted charts, those sweep lines on RADAR scopes, and of course... all the Pilot Flight Briefings I could ask for.

Marines don't get the chance to stand idle, so it wasn't long before I found myself at Marine Corps Air Station, Iwakuni, Japan, working in portable weather offices. It was a great experience to work in a Multi-National Environment.

In 1986, I decided not to re-enlist but focus on getting into the National Weather Service.

While working on the old "paper" SF71 employment application, I managed to snag a few government contract observing positions at WSMO Pittsburgh (PIT), WSMO Sterling (Test & Evaluation Section), VA and WSMO Dulles, VA (IAD) Offices.

Finally in March 1990, my Official appointment was to WSMO Chatham Massachusetts (CHH). As the Weather Service began its reorganization of forecast offices in the middle 1990's, it was time to relocate. I managed to fill a vacant slot at Weather Service Office Bridgeport Connecticut (BDR). As it was in Cape Cod, coastline stations offer some fantastic surf-cast fishing spots, and I also logged many more hours in an airplane and glider, flying sea breeze fronts.

The next fork in the road came when the Automated Surface Observing Systems (ASOS) were being implemented at airports. As they were being certified, weather offices were closing, leaving FAA Flight Service Stations to handle observing programs. Luck was on my side and I was offered a position in Binghamton New York (BGM). Leaving Southwestern Connecticut was a sorrowful time. I had gotten very close to many Farmers, Fellow Pilots, Golfers, local Officials, and Radio DJ's that relied on this office for all its weather information. It was home for me.

Adjusting to life in Central New York wasn't too hard, it seemed simple actually. Cloudy EVERYDAY - 50/50 chance of rain. In winter, expect ICE! A few of the

best things about this office was my introduction to computers and getting the internet. Days of Teletype, Live broadcasts on NOAA Weather Radio, Weather Charts hanging on walls and old design RADAR's were going out fast.

There comes a time in most people's career when they say: I want to get out of the cold. It was time for me to look west. Weather Service Office Tucson, Arizona just happened to need people for their office restructuring, and I wasn't shy about asking for that opportunity. WFO Tucson came to be my last and most rewarding office. Coming as a Hydrometeorological Technician and leaving as an Observation Program Leader. Again, it gave me the opportunity to be a part of a group of professionals that supported National Programs and events.

In my 19 years working here, I have seen many people come and go through the doors. I'll remember those young faces of interns that struggled to learn as much as they could from an old school guy like me, to prepare for that journeyman position somewhere else.

Most of all, I will miss all those people around southeast Arizona that had or continue to volunteer their time to maintain a weather observation station, for the good of recording long term climate data. To each of them, Thank you very much!

You have made the ride fun.



Mic Sherwood

"Most of all, I will miss all of those people around southeast Arizona that had or continue to volunteer their time to maintain a weather observation station, for the good of recording long term climate data. To each of them, Thank You very much!"



Technology Changes of the Past 30 years

Greg Mollere, Senior Forecaster and Spotter Training Coordinator

Introduction:

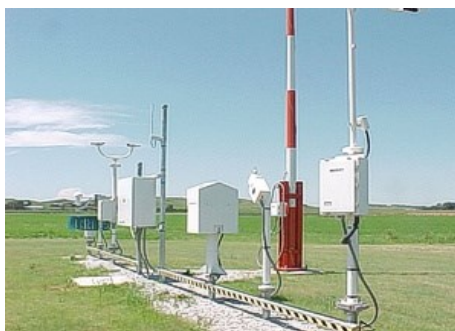
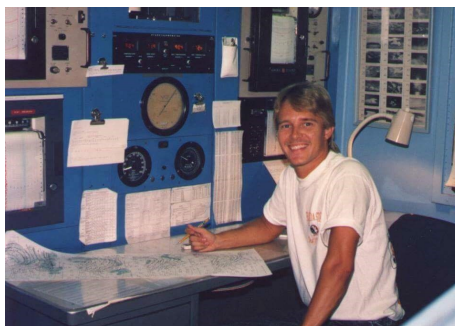
As I have been contemplating my upcoming retirement, reflection on the past is a natural part of the process of closing one door and looking forward to opening another. That said, when I look back on the past 30 years of my career in the National Weather Service I am struck by just how much change has taken place in that time. In our personal lives, I am sure that some of the

baby boomers out there (of which I am a part of that generation by a few years), can reflect on the technology that has made its way into our daily lives, from the 4K Ultra HD televisions to those powerful little computers we carry on a daily basis that we call smartphones, not to mention how the internet has taken over how we conduct our lives in the past twenty years.

Looking at the changes in technology and thus job related responsibilities over the span of my career has been astonishing. Of course since this process occurred over three decades, it didn't at the time seem to be such a daunting task to adapt.

Surface Weather Observations:

Weather observations were a big part of the duties at a local office like Tallahassee, where I began my career. These observations were completed by hand, with pen and paper. In the photo to the right, you can see one of my former colleagues from Tallahassee, Don Shepherd, sitting at the surface observation desk from nearly 30 years ago. Don is currently a Senior Forecaster in Mobile, Alabama. The observations that I performed in those early years were called SAO's (Surface Aviation Observations). This format of weather observation was used by the National Weather Service through 1996 when the format was changed to accommodate most of the world that uses METARs (METeorological Terminal Aviation Routine weather reports). During the late



80s and early 90s surface observations changed from being taken by hand to a system called MAPSO (Microcomputer Aided Paperless Surface Observations). This system allowed the weather observer to input the same elements from a METAR into a personal computer and transmit the observation via AFOS and thus to the world.

Beginning in the early 90s and ending in the early 2000s, an automated system of surface weather observations came into being that was called ASOS (Automated Surface Observing System). This system for the most part took the human element out of the process. This system was implemented across the entire country. A photo of a typical ASOS can be seen to the left.

AFOS/AWIPS:

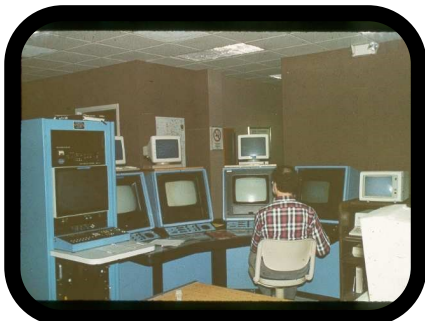
When I started my career in Tallahassee, Florida, which was one of the many smaller offices referred to as a WSO (Weather Service Office), the system that we used for interrogating computer models, transmitting surface observations and issuing warnings was called AFOS (Automation of Field Operations

and Services). This system only had a handful of meteorological fields to interrogate, all in black and white, with limited access to looping of these fields. You can see at the top of the next page a picture of this old relic. At that time we also had only one PC in the office. It was an IBM that used two

5.25 inch floppy disks to operate, one for the operating system and another for the software/program that was being utilized. More often than not the software loaded was called "Superwriter", a word-processing software used to prepare the forecast.

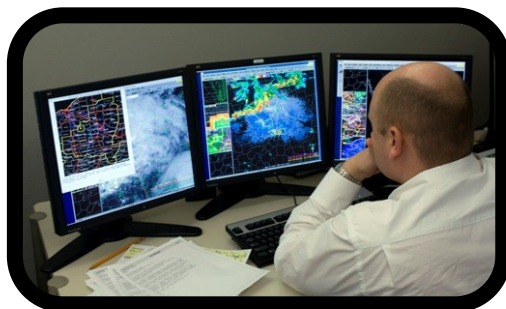
Technology Changes of the Past 30 years

Greg Mollere, Senior Forecaster and Spotter Training Coordinator



AFOS (Automation of Field Operations and Services)

AFOS was eventually phased out during the modernization of the early 90s, with AWIPS (Advanced Weather Interactive Processing System) taking the place of AFOS in the mid to late



AWIPS (Advanced Weather Interactive Processing System)

90s. The photo above right shows a picture of AWIPS as it looks today. This system enables forecasters to overlay several fields or images on top of each other. In addition, looping of

these fields was part of the system with color images that the individual forecaster could customize to his/her liking or in some cases by necessity, given that the default colors for velocity and SRM (Storm Relative Motion) on the WSR-88D images is red/green, which are two colors known to give those with color blindness problems. That said, images from the Doppler radar (WSR-88D) were incorporated into AWIPS so that interrogation of storms could be done within one system.

WSR-57/WSR-74/WSR-88D:

The network radars in those early years of my career were the WSR-57 (Weather Surveillance Radar-57) and the WSR-74. The 57 radar used WWII technology and could only detect and measure reflectivity, not velocity. The WSR-74 (C and S bands) came on board well before my career started in the mid to late 70s. Since there were very few WSR-57 radars across the country (around 66 to cover the entire nation), the WSR-74S was used to fill in the gaps in radar coverage and serve the network of radars utilized to take hourly radar observations. The WSR-74C was used mainly as a local severe weather radar. An image of the radar equipment that the radar operator used for taking hourly observations and to interrogate individual storms can be seen to the right.

During the modernization of the Weather Service in the late 80s through the early 90s, the WSR-88D was eventually deployed between the years 1992 to 1997. The 88 represented the year in which it was 'planned' to be deployed and the 'D' represents "Doppler", and utilized the "Doppler Effect" of the returned signal to determine the target object's velocity. This technology allowed forecasters to see the motion within a storm and to be able to detect mesocyclones within the heart of a thunderstorm, which depending on the strength of this feature

could "imply" tornadic activity. During those initial years of the deployment of the WSR-88D radar to field offices and prior to the advent of AWIPS, the system used to interrogate storms was called the "PUP" (Principal User Processor). An example of the PUP can be seen to the right. Once AWIPS replaced AFOS, the PUP was no longer needed, since all radar interrogation functions could be performed within the one system.

More recently, an upgrade to the WSR-88D was conducted between 2010 and 2013 to add dual-polarization technology to the radars. This upgrade allowed the radar to send out both a horizontal and vertical oriented signal, which allows the forecaster to determine precipitation type (rain, snow, hail) as well as size and shape of the hydrometeors which ultimately through algorithms gives more realistic rainfall estimates.

If you would like more detailed information on the topic of radars, you can go to the following links:

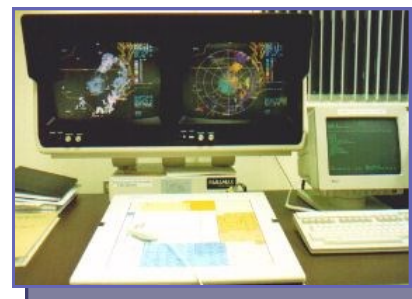
<https://en.wikipedia.org/wiki/WSR-57>

<https://en.wikipedia.org/wiki/WSR-74>

<https://en.wikipedia.org/wiki/NEXRAD>



WSR-57 Radar desk



Old WSR-88D PUP

Technology Changes of the Past 30 years

Greg Mollere, Senior Forecaster and Spotter Training Coordinator

Upper-Air Program:

When I started in the late 80s the upper-air weather balloon launching system was called Micro-ARTs (Microcomputer Automatic Radio-Theodolite) system, which was an analog system. An observer would inflate a weather balloon with hydrogen inside of an inflation building (below left) on the inflation table (below center), attach a parachute and a weather data collecting instrument to the end of the entire system, called a radiosonde. The observer would release the balloon into the air, which was initially tracked visually until the observer was able

to lock on to the radio signal at a frequency of 403MHz, which enabled the person to track the instrument until the balloon would burst, which would typically be at about 100,000 ft. At that point the parachute would deploy, allowing the instrument to fall back to earth with a potential for the instrument to be found and refurbished.

During the mid 2000s this old system was replaced by the RRS (Radiosonde Replacement System), which is a digital system. The RRS is comprised of a new Global Posi-

tioning System (GPS) tracking antenna referred to as the telemetry receiving system or TRS, 1680 MHz GPS radiosondes, and a new PC workstation. During the transition period between these two systems, approximately 4 to 7 different radiosondes or instrument types have been used, with improvements to each instrument type along the way. For example, on the old system the batteries that powered the system were water activated and needed to be soaked in water for a short period of time before attaching it to the instrument. A picture of this old battery type can be seen below. The RRS system uses regular AA batteries to power the instrument during the flight.



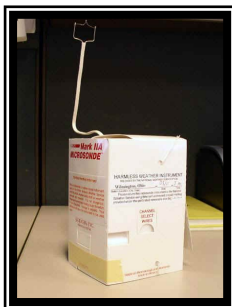
Typical Inflation Building



Inflation Table inside Building



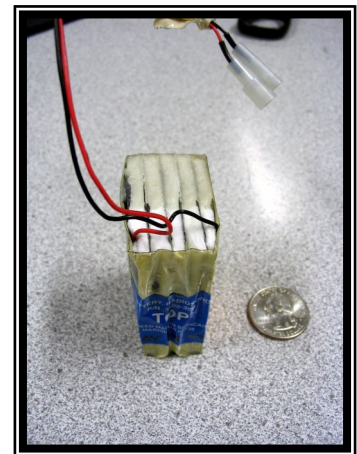
Entire system (balloon, parachute and instrument)



Old Instrument



New RRS Instrument



Old Water Activated Battery

Cooperative Observer Program Needs your Assistance:

Mic Sherwood, OPL

The National Weather Service is in need of a volunteer to serve as a cooperative weather observer in the downtown Sierra Vista area. Specifically in close proximity (less than a mile) to the firehouse on Fry Blvd. This could be a person living in a

private home in the area or a business.

This requires taking high and low temperature and precipitation measurements once a day, for seven days a week.

To be clear, this is a non-paid duty,

however the National Weather Service will provide all needed equipment to perform these duties.

If you are interested or know someone that might be, contact Senior Forecaster, John Glueck at:

john.glueck@noaa.gov

Technology Changes of the Past 30 years

Greg Mollere, Senior Forecaster and Spotter Training Coordinator

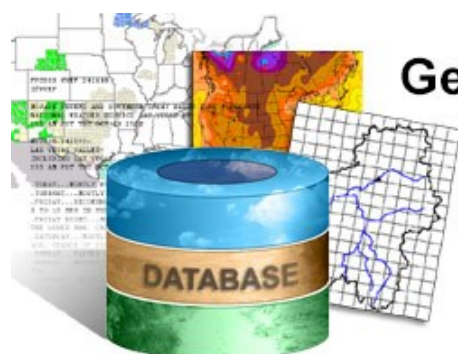
National Digital Forecast Database:

Another paradigm shift which occurred about 15 years ago, was the way the National Weather Service forecasters prepared a forecast. Prior to that time a forecaster would analyze the various Numerical Weather Prediction models that were available. The forecaster would determine which model he/she thought was performing better than the others, based on recent past performance or many other factors that would come into play. Once the forecaster had a cognitive image of what the forecast should be, he/she would simply group the forecast zones into common areas based on cloud cover, chance of precipitation, temperature and wind to come up with a text forecast product,

which was referred to as the ZFP (Zone Forecast Product) and would then spend a significant amount of time editing this text product to reflect the forecaster's mental image of what the forecast should be.

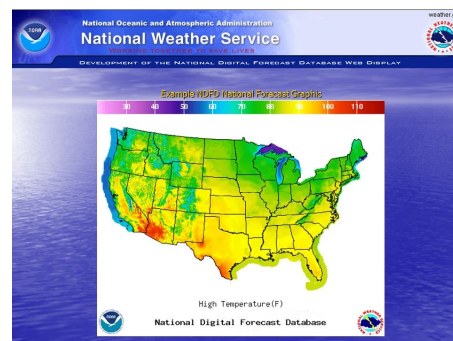
With the advent of the National Digital Forecast Database, a forecaster would manipulate various digital 'grids' for numerous weather parameters, such as temperature, dewpoint temperature, chance of precipitation (POP), sky condition, weather and wind direction and speed. Once the forecaster was satisfied that the 'grids' conveyed the notion of what the forecast should be, based

on analysis of the various models, then a program would run that would take the elements of the 'grids' and generate various text products based on the grids. This resulted in less time typing, but more time manipulating the grids. These grids could then be downloaded by anyone interested in the various elements of the forecast and use this data for a multitude of purposes.



General Information

NDFD
NWS National Digital
Forecast Database



An example of a high temperature grid that have been meshed together from every office in the country for a particular day.

National Weather Service Tucson Office Staff

Meteorologist in Charge.....Vacant

Administrative Support Assistant.....Leslie Cole

Warning Coordination Meteorologist.....Kenneth Drozd

Science and Operations Officer.....Daniel Leins

Service Hydrologist.....Erin Boyle

Electronic Systems Analyst.....Chris Carney

IT Specialist.....Evelyn Bersack

Electronic Technicians.....Rick Leupold, Keith Sapp

Senior Forecasters.....Jeff Davis, Brian Francis, John Glueck, Jim Meyer, Greg Mollere (soon to be vacant, due to retirement)

General Forecasters.....Carl Cerniglia, Emily French, Glenn Lader, Chris Rasmussen, Gary Zell

Meteorologist Interns.....3 Vacancies

Observation Program Leader.....Mic Sherwood (soon to be vacant, due to retirement)

Coyote Crier

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We're on the web:
www.weather.gov/tucson



Be looking for the Spring Edition of the Coyote Crier sometime during late February or early March of 2017. In that edition we will publish the locations, times and dates of the Spotter Training sessions. If it has been five years or more since you attended a spotter training class, we recommend that you clear a space on your calendar next spring to attend one of these informative sessions.

Greg Mollere, Senior Forecaster, Spotter Training Coordinator & Coyote Crier Editor

What You As A Skywarn Spotter Should Report??

Tornado: A Tornado or a funnel cloud
Heavy Rain: A Half Inch or more in less than an hour
Hail: Dime size hail (1/2 inch) or larger
High Wind: Estimated or measured 45 mph or greater
Flooding: Any Kind of Flooding
Snow: One inch or more (2 inches if above 5000 feet)
Visibility: Less than one mile
Death/ Injury: Any weather related reason
Damage: Any weather related reason
(520) 670-5162 or 1-800-238-3747

Happy Holidays!!!



All of us at the National Weather Service in Tucson want to express our gratitude for having you be part of our team during severe weather this past monsoon. We appreciate all of those phone calls and on-line reports notifying us of what kind of weather you were experiencing in your neck of the woods. We also want to wish all of you a happy holiday season!

